

Work Order ID 162913

Friday, June 16, 2017 8:16:28 AM

162913

Page 1

Item ID: D3529-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Bearpaw
 Start Date: 6/23/2017 Start Qty: 5.00 ***5*** Cust Item ID:
 Required Date: 7/7/2017 Req'd Qty: 5.00 ***5*** Customer:
 Reference:

Approvals: Process Plan: DAS 21 9-89 Date: JUN 16 2017 Tooling: Date: Run Start ***NR1***
 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3529	Rev A								

110 0.00
110 FLOW WATER JET
 Waterjet Memo 0.73
 FLOW CNC Waterjet CUT BLANK AS PER FILE D3529-1BLANK

120 1.23
120 HAAS CNC VERTICAL MACHINING #1
 HAAS 1 Memo 2.46
 HAAS CNC vertical machine #1 1-Inspect material for defects or damage prior to machining 2-Machine as per Folio FA645 and Dwg D35293-Deburr

130 0.00
130 QC2- Inspect parts off machine FAI/FAIB
 QC Memo 0.05
 Quality Control

DAS
49
9-89

DAS
49
9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
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Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
Misidentified ☐	Past Due ☐																								

Work Order ID 162913

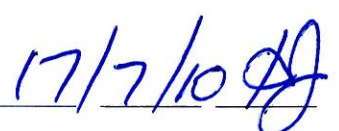
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Page 2

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 *140* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.10				<u>5</u>	<u>0</u>		DAS 44 9-89 17-07-07
150 *150* Packaging Packaging	Identify as per dwg & Stock Location: <u>SH45VA</u> Memo	0.00 0.05				<u>5</u>			DAS 6 9-89 JUL 10 2017
160 *160* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.50							17/7/10   JUL 10 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

Picklist Print

Friday, June 16, 2017 8:16:27 AM

Page 1
T

Work Order ID: 162913

162913

Parent Item: D3529-1

D3529-1

Parent Item Name: Bearpaw

Start Date: 6/23/2017

Required Date: 7/7/2017

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev:A New Issue 06-06-28 JLM
IPP Rev:B New Manufacturing Method 08-11-27 Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No			100	sf	628.0000	1.5	7.894737			
									**			06/17/06/17	
						<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
						MAT018	628						
						m136453	228						
						m137443	400						
										8.5			

DQA: _____ Date: _____



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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

DART AEROSPACE LTD		Work Order: 162913
Description: Bearpaw		Part Number: D3529-1
Inspection Dwg: D3529	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

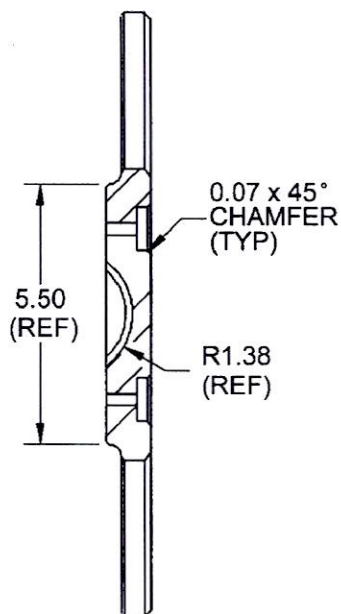
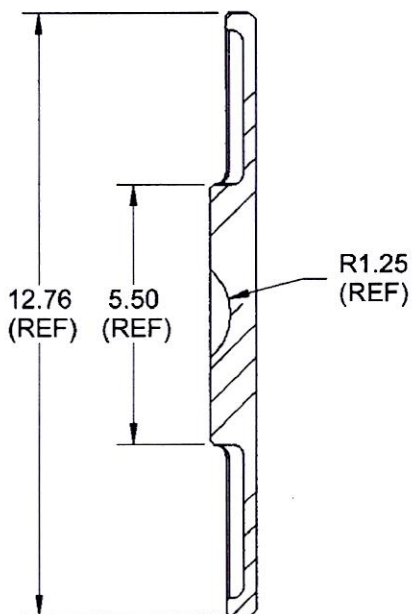
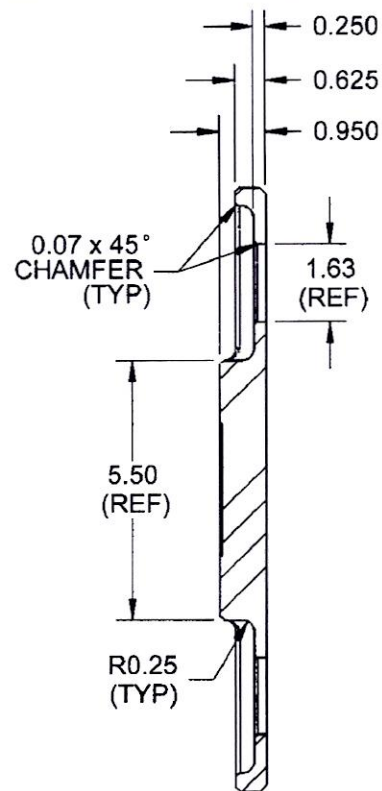
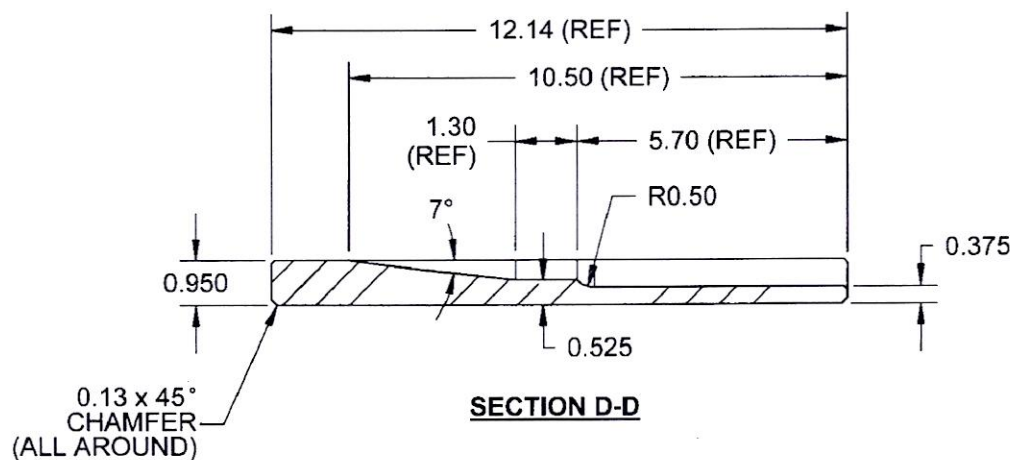
Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A 5.50	+/-0.030	5.50	✓		vernier CNC-02	
B 0.07 x 45°	+/-0.030 x 0.5°	0.07 x 45°	✓		vernier CNC-02	
C R0.25	+/-0.030	R.025	✓		RG	
D 0.250	+/-0.010	0.256	✓		Height gage	
E 0.625	+/-0.010	0.629	✓		Vernier CNC-02	
F 0.950	+/-0.010	0.956	✓		Vernier CNC-02	
G 1.63	+/-0.030	1.620	✓		vern	mm L-05
H 12.14	+/-0.030	12.140	✓		tape	
I						
J 5.70	+/-0.030	5.700	✓		vern	mm L-05
K 0.375	+/-0.010	0.384	✓			
L 0.525	+/-0.010	0.533	✓			
M 0.13 x 45°	+/-0.030 x 0.5°	0.128 x 45°	✓			
N R0.50	+/-0.030	0.500	✓			
O 12.76	+/-0.030	12.76	✓		tape	
P 3.38	+/-0.030	3.38	✓		tape	
Q 3.75	+/-0.030	3.375	✓		11	
R 5.187	+/-0.010	5.187	✓		vern	mm L-05
S 5.25	+/-0.030	5.249	✓			
T 7.13	+/-0.030	7.13	✓			
U Ø0.260	+0.006/-0.001	0.260	✓			
V 0.30	+/-0.030	0.310	✓			
W 0.93	+/-0.030	0.925	✓			
X 1.30	+/-0.030	1.290	✓			

Measured by: 9-89	Audited by: 44	Prototype Approval:	N/A
Date: 17/07/06	Date: 17-07-07	Date:	N/A

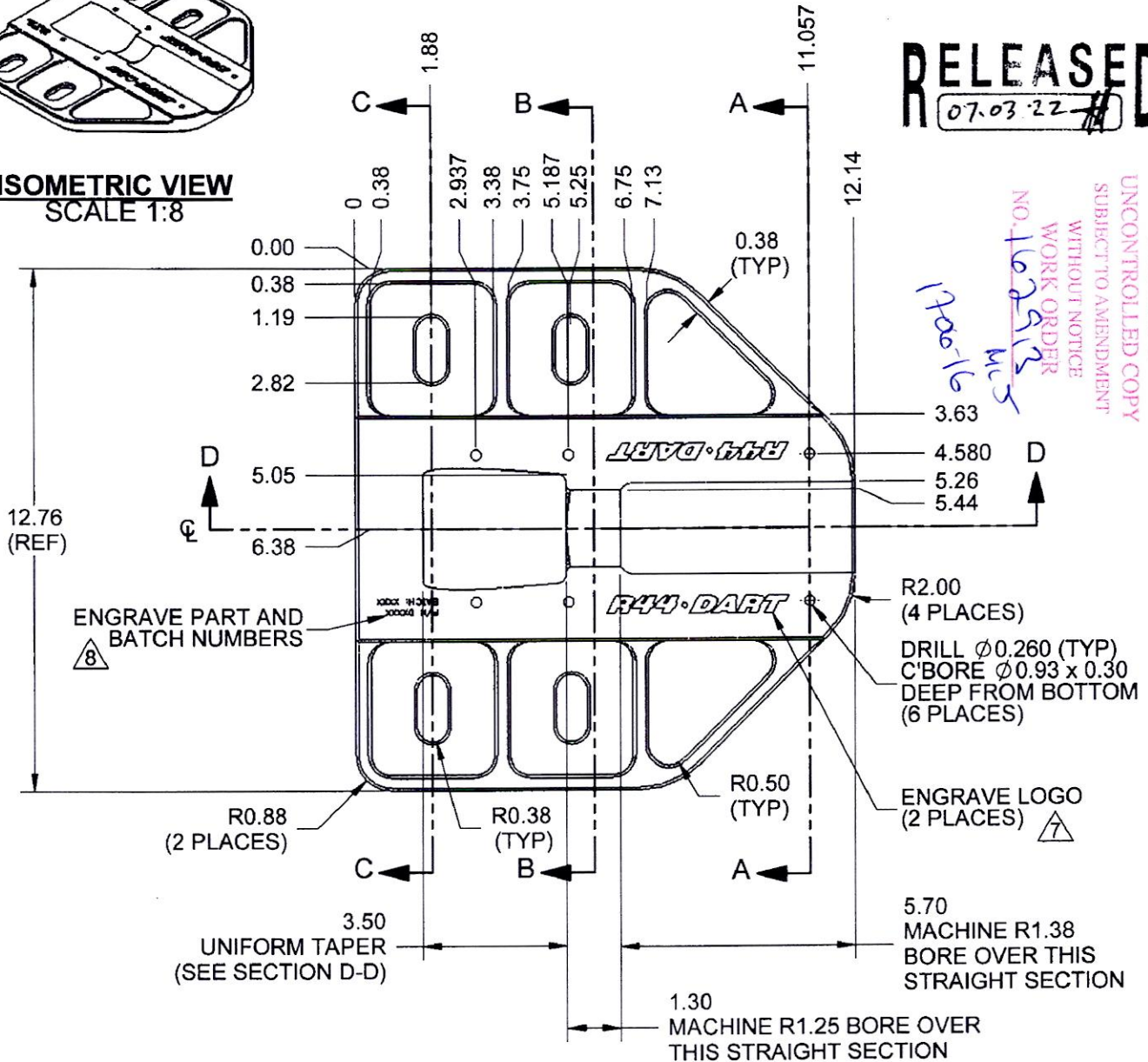
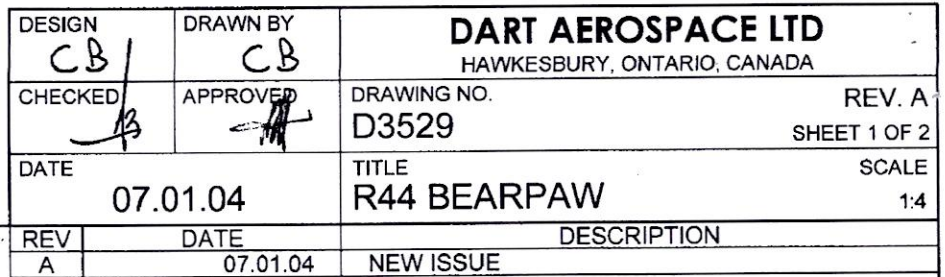
Rev	Date	Change	Revised by	Approved
A	07.05.01	New Issue	KJ/JLM	
B	08.05.06	Dimension I removed	KJ/DD	

DART

DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3529
DATE 07.01.04	TITLE R44 BEARPAW	REV. A SHEET 2 OF 2 SCALE 1:4

RELEASED
07 03 22**SECTION A-A****SECTION B-B****SECTION C-C****SECTION D-D****COPYRIGHT © 2007 BY DART AEROSPACE LTD**

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D3529-1 R44 BEARPAW

1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.00 THICK (MACHINE TO 0.950)
2) FINISH: NONE
3) PART IS SYMMETRIC ABOUT C
4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
5) ALL DIMENSIONS ARE IN INCHES
6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX
7) ENGRAVE LOGO TO MAX DEPTH OF 0.012 AT LOCATION SHOWN
8) ENGRAVE PART AND BATCH NUMBERS TO MAX DEPTH OF 0.010 AT LOCATION SHOWN

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